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| Exhibit A | Charles R. McClure, Joe Ryan & John Carlo Bertot, <i>Public Library Services and the Digital Divide: The Role and Impacts from Selected External Funding Sources</i> , Information Use Management and Policy Institute (Jan. 2002) |
| Exhibit B | Declaration of Mark Flynn, State Library of Florida |
| Exhibit C | Declaration of Patricia Wallace, Enoch Pratt Free Library/State Library Resource Center, Baltimore, Maryland |
| Exhibit D | <i>The Vital Role of Public Libraries in America and Subsequent Need for a Unique Methodology for Determining E-Rate Discounts for Public Libraries: a White Paper</i> , GeoLib Program/Florida Resources and Environmental Analysis Center Florida State University in collaboration with the American Library Association, Dr. Christine M. Koontz, Dean J. Jue and Stephen K. Hodge |
| Exhibit E | <p>“Libraries Can Supply Answers Any Time,” <i>The Press Enterprise</i>, Feb. 9, 2002</p> <p>“New Online Service May Change the Way America Surfs; Professional Librarians to be Available Online,” <i>U.S. Newswire</i>, Aug. 21, 2001</p> <p>“The Library that Never Closes,” <i>Forbes ASAP</i>, Feb. 19, 2001</p> |

Exhibit A

Charles R. McClure, Joe Ryan & John Carlo Bertot, *Public Library Services and the Digital Divide: The Role and Impacts from Selected External Funding Sources*, Information Use Management and Policy Institute (Jan. 2002)

Information Use Management and Policy Institute

PUBLIC LIBRARY INTERNET SERVICES AND THE DIGITAL DIVIDE:

The Role and Impacts from Selected External Funding Sources

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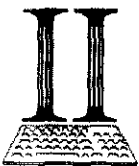
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EXECUTIVE SUMMARY

Over the past five years, many public libraries have come to rely on sometimes small, but critically important, external sources of funding to establish and maintain their technology infrastructure, telecommunications services, and network-based resources and services. These external funding sources may be from the government such as the federal Library Services and Technology Act (LSTA) Grants to State Library Agencies, and the E-rate program, or other federal, state, and local government programs. In addition, non-governmental sources of external funding such as the Bill and Melinda Gates Foundation U.S. Library Program play a key role. External funding is particularly vital to enable public libraries to address the potential for a digital divide in their communities.

Significant during this period was public library use of sources of external funding in combination, rather than in isolation, to leverage outcomes far greater than any single source could achieve. Public libraries engaged in significant experimentation and innovation in information services development. Indeed, public librarians successfully leveraged these external funds to:

- Offer new networked-based programs and services;
- Obtain additional resources and support for their libraries;
- Better integrate themselves into the local community's information infrastructure;
- Encourage economic development; and
- Increase the visibility and credibility of the public library as "the information place" in their community.

Often the external funds used comprised only 1-3% of the library's budget. Yet such funds allowed public libraries to experiment, innovate, and demonstrate how Internet services could be deployed and how such services could be of benefit to all members in the communities that libraries serve.

Study's Purpose

The present study is the first systematic effort to better understand the role of external funding in the development of public library network resources and services, their identification, and their benefit and impact, particularly as they affect the digital divide. The study investigates:

- What role did key external funding sources, state libraries and public libraries play in the development of public library technology infrastructure, telecommunications services, and network-based resources and services, and address a potential for a digital divide in their communities?
- What common network resources and services did public libraries develop? What were their impact and benefit?
- What next steps do state and public libraries plan that may benefit from external funding?

Study results can assist external funders, state and federal policy makers, the public library community and others interested in the future of public libraries to:

- Identify key policy issues related to the digital divide, particularly Universal Service and equitable access to networked information resources and services in the United States;
- Provide an assessment of the roles public libraries play in the digital divide, and the impact of those roles on the communities the libraries serve;
- Provide a sense of the impacts and benefits communities derive from public library Internet connectivity and services;
- Identify the role of E-rate discounts and other funding sources in library services and technology planning activities;
- Provide a better understanding of how these awards are being used by libraries;
- Provide a better understanding of the E-rate application and disbursement process;
- Assist policy makers to determine how best to refine various Universal Service policy goals through programs such as the E-Rate and LSTA in relation to the digital divide; and
- Assess systematically the relationship between various funding programs and Internet services.

The authors conducted this study between February 2001 and January 2002 employing a range of data collection techniques including site visits, focus groups, surveys analysis of E-rate data sources, local library and state library reports, documents from external funders, and other material.

THE CURRENT CONTEXT

Public libraries reside in an increasingly complex technology environment – one that requires constant innovation in service provision as well as innovation in building and maintaining a technology infrastructure through which to provide network-based services. During the last five years, public libraries have made significant gains in obtaining, deploying, and using a range of Internet and telecommunications hardware, software, and services. These advances, due in part to the leveraging by public libraries of a number of external funding sources, enabled public libraries to build upon their existing infrastructure in ways that would otherwise not have been possible.

The recent digital divide studies conducted by the U.S. Department of Commerce, National Telecommunications and Information Administration (1995, 1998, 1999, 2000, and 2002) identify segments of the U.S. population that are less likely to have access to networked information services and resources in the home. These populations tend to be minority, less educated and lower income. A key question in the digital divide is what community access centers – such as the public library – do to provide those “have-nots” with critical access to technology and technology-based resources.

Findings and Key Issues

The findings from this study support keeping the momentum going on what is a very promising start to the introduction of a new digital age in U.S. public libraries and the communities that they serve. Key findings include:

LSTA is a model federal program for funding libraries. Participants indicated that LSTA Grants to State Library Agencies funding, guided by the Institute for Museum and Library Services (IMLS) and managed at the state level by state libraries, works well overall. The principal improvement suggested was to fund adequately what has been by all accounts a very successful and beneficial program. Significant was that study participants suggested only minor changes (such as a possible add of construction/renovation funds if there was an overall, substantial funding increase). There was widespread support among study participants for the American Library Association's (ALA) and Chief Officer's of State Library Administrators' (COSLA) efforts to secure additional funding and their suggested changes.

E-rate funding is essential to local operations, but needs fine-tuning. Most library managers agreed that the E-rate initiative was targeted to assist with crucial operating expenses – Internet and telecommunications charges, wiring and basic network equipment. But the program's procedures need attention including:

- Simplify the application process. Most library managers found the process to be a “nightmare,” overly “cumbersome,” unnecessarily “complicated and unending.” They also felt the process failed to recognize the public library's unique mission, distinct from schools, in its community.
- Increase efforts to get clear and accurate information to the library community. Improve involvement of state libraries, consortia, and library systems to achieve this;
- Increase public library participation, in particular, adjust library eligibility requirements to participate in internal wiring and network equipment portions of the program; and
- Find a way to fund support for libraries with neither the staff, time, nor technical expertise to successfully complete the application process.

Participants indicated a need for the E-rate program to allow a different approach, including application process and criteria, for public libraries than for public schools. As public libraries differed in significant ways from public schools in areas such as mission, who they serve, hours or operation, and overall funding-related issues, it is inappropriate to treat them equally in the application, review and award process.

Leveraging external support to serve those impacted by the digital divide. It is clear that no single funding source by itself would have successfully introduced a public library Internet service as rapidly and effectively unless that funding source was leveraged with others. Fortunately, with the assistance of state libraries, funds were leveraged to create an information and technology infrastructure capable of delivering a sustained service rather than a piece of equipment to the public. Furthermore, present evidence suggests that no organization, no matter how deep the pockets, can fund by itself the type of effort necessary to make the future incremental improvements in library Internet services. Future funding in this area needs to be flexibly designed to promote leveraging -- the model LSTA's Grants to State Library Agencies. Future external funding programs seeking to have successful state or national reach must actively engage the state libraries as partners to coordinate leveraging and support programmatic goals.

Equipment was not enough. Public library managers and funders learned as they implemented Internet services that installing a piece of equipment was not enough. Rather, a

means had to be found to embed an information infrastructure around the new technology to enable a sustained service. It was necessary to leverage different funding sources to rework technology, collections, their organization, types of public service, public training, promotion of these activities, increase staff or change their function, train staff, finance, manage, and evaluate the new service. It was important to coordinate the identification and strategic funding of each information infrastructure element.

Coordination was necessary and the State Library delivered. There was a need for some entity to step in and coordinate, influence or nudge funding for public library Internet services in the appropriate direction. Many state libraries took on these roles and did so without much reward – a concern that should be addressed by external funders in the future. Consortia and library systems played significant roles as well, particularly when state libraries with limited resources were overwhelmed. Leveraging of external funds cannot work well without early State library involvement and support for that involvement.

Someone must have authority and responsibility for seeking external funds. Clearly, there is untapped support within local communities, governments, and the private sector for public library Internet services. The support may be in cash, but it also may be in a range of creative and/or equitable partnerships. It is imperative for the public library community to identify the next extraordinarily generous Bill and Melinda Gates Foundation, particularly as the computers first received through the generosity of the Foundation are now in need of upgrades.

Remembering the poorest counties and communities. In addition to small libraries and urban branches, there is a need to focus attention on the poorest counties and communities in the U.S. It is one thing to design programs that work for most. It is another task to go back and ensure that the intended benefits of a program have reached those who are most in need, often despite programmatic design, regulations, and procedures.

Maintaining sustainability. While the Gates Foundation must be applauded for its ambitious, generous and important work in assisting public libraries enter the networked environment and address digital divide issues, who will be the next Gates in 2003 remains unclear. Between 1998-2001 a vast number of public libraries were able to obtain and upgrade information technology and training that would not have otherwise been available to them. In 2003 (or sooner) all that equipment will need to be replaced or upgraded, and ongoing train needs will persist.

Understanding situational factors. Numerous factors combine to shape the overall effectiveness of programs such as LSTA, E-rate, and the Gates Fund support. Situational factors occur at a variety of levels that influence funding. They occur at the funding level in how the funds are requested, awarded, and regulated. They occur at the State library level, for example, in terms of personnel, or agency commitment/interest in a particular program. They occur at the local library level in terms of organizational structure, information technology infrastructure, and personnel. Finally, they occur at the community level in terms of local community demographics, form of government, interest in and support for the library, etc. In addition, more research is needed to better understand what combinations of funding programs, State library assistance, local library involvement, and community composition results in the greatest.

External funders must address these and other situational factors. Successful funders – notably the Gates Fund and the LSTA Grants to State Library Agencies – used three strategies. First, successful external funders recognized that many situational factors could only be recognized and addressed during implementation so they built in internal and external evaluation mechanisms. Second, they designed their program with the goal clear but the detail flexible so as to take advantage of what the evaluative process revealed. Third, wherever possible, they listened to and trusted the judgment of their public library partners.

Making the Case for Public Libraries

The findings from the study suggest that there are numerous topics and research questions requiring additional attention. To some degree, the research reported here is a first effort to assess how externally funded programs (LSTA, E-Rate, Gates Fund, and others) have contributed to public libraries' ability to address digital divide issues. This research, however, is but a "snapshot" of benefits and impacts resulting from these external funds during 2000-2001. There is much to learn by conducting such assessments, yet the basic need is to establish a regular *program* of national assessment for such funding initiatives. The Information Institute at the School of Information Studies, Florida State University plans to continue research and data collection efforts and establish a clearinghouse for such information.

The public library community needs to initiate a public discussion and debate about how best to assess the benefits and impacts resulting from external funding programs such as those discussed in this report. This would include agreement on standards and performance indicators for assessing such programs, discussions on how such benefits and impacts contribute to addressing digital divide issues, and determination as to what criteria facilitate the assessment of national policy initiatives and funding programs related to public libraries. Ultimately, there is a need for ongoing evidence and data to assess and refine these programs. The better, more sustained and systematic the assessment, the better the program in terms of its efficiency and ability to achieve its objectives. This, in turn, contributes to sustaining the notion that public libraries are a good place to invest scarce resources in the future.

Next Steps

The authors see this study as a first step on a longer journey to continue efforts to (1) update and improve the information technology infrastructure in public libraries; (2) better coordinate efforts among the federal government, other funders, state libraries and state government, and local libraries and consortia to maximize the impact and benefit from various external funding programs; and (3) improve public library networked and Internet services to better serve those who reside in the digital divide.

Equally important is to marshal resources at the policy level to make certain that those making federal and state policy understand the importance and impact of LSTA, E-rate, and related programs. Findings from the study described here not only document the importance and impact from these programs; they also offer recommendations for how to improve such programs to have even greater impact on public libraries. LSTA and E-rate, especially, need to

be expanded, fine-tuned, and better supported so that public libraries can continue to serve as a key means for mitigating the digital divide.

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Finally, a word of praise for the external funders, who are the focus of this study and have supported public library Internet development. As shown in this study, this external support from a number of programs funded by the U.S. government, from state government, the Bill and Melinda Gates Foundation, and other sources were essential for public libraries to have made the gains they have in providing Internet services.

While the authors gratefully acknowledge all the various people and organizations that contributed to the completion of the project, the responsibility for the report belongs to us. Specifically, the research and points of view expressed in this report are those of the authors and do not represent the official position or policies of the sponsoring organizations.

We realize there is still considerable room for debate and discussion of the findings and recommendations offered in this report. Clearly, there is a significant range of Internet and telecommunication impacts and benefits in public libraries. This evolution (or perhaps revolution) of public libraries in terms of their Internet services, and the role of external funding in making this happen, is exciting and significant. We look forward to working with others as public libraries continue to evolve in this networked environment and as external funding programs continue to support this growth and development.

Charles R. McClure
Joe Ryan
John Carlo Bertot
January 2002

CHAPTER 1: INTRODUCTION

From 1997-2001, public libraries in the United States made a significant advance in obtaining and deploying network and telecommunications technology. Public libraries, with critical external support, began making delivery on the promise of the Internet to revolutionize the provision of information and services to all people and all types of communities throughout the U.S. These technologies now serve as a basis or core for a range of library services and resources that simply were not available 10 years ago. Many of the innovative network services occurred because of the imaginative and leveraged use of key external funding programs such as the Library Services and Construction Act (LSCA), E-rate, the Bill and Melinda Gates Foundation, and other private, federal, state, and local sources.

This report draws upon a range of data that describe the innovative uses, the manner in which these external funding sources were leveraged, impacts and benefits from the funds, and the ways in which these funding sources contributed to extending public library network services. The report also makes suggestions for how to enhance these programs.

Key External Funders Covered

The deployment of public library Internet services would not have occurred without leveraged external funding from many sources. This report focuses attention on the role of the three principal, national-level, external funders of public library Internet services: Library Services and Technology Act (LSTA),¹ E-rate,² and the Bill and Melinda Gates Foundation U.S. Libraries Program (hence forth the Gates Fund).³

Library Services and Technology Act (LSTA) Grants to State Library Agencies

The Library Services and Technology Act (LSTA) was embedded in the Museum and Library Services Act of 1996 (P.L.104-208, H.R. 3610). LSTA, and its earlier versions, the Library Services Act (LSA) and the Library Services and Construction Act (LSCA), have provided the longest running most important federal support of public libraries to date. LSTA's focus is to encourage the use of information technology in libraries and to empower under-served and diverse populations. The Institute of Museum and Library Services (IMLS) administer LSTA.⁴ The LSTA Grants to State Library Agencies program, the focus of this study, provided libraries with nearly \$558 million during the period 1998-2001.

¹ See IMLS. <<http://www.ims.gov/>>.

² See E-rate <<http://www.sl.universalservice.org/>>.

³ See Gates Fund. <<http://www.gatesfoundation.org/libraries/uslibraryprogram/default.htm>>.

⁴ IMLS administers a number of programs supporting libraries of all types, museums and library-museum partnerships. Library specific funding administered by IMLS includes: grants to state library agencies, Native American library services grants, Native Hawaiian library services grants, national leadership grants for libraries, and the national award for library service. The focus of this study is one of these programs, the Grants to State Library Agencies and the use of that funding with public libraries (although the funding is also used by other types of libraries).

E-rate

The Telecommunications Act of 1996 (P.L. 104-104) (U.S. Senate, 1996) laid the groundwork for the establishment of the E-rate – a means by which the federal government would provide discounts to reimburse schools and libraries for various types of expenditures related to connecting to and using the Internet – as one means through which to guard against a digital divide fostered by technology “haves” and “have-nots.” As of November 2001, some \$7.65 billion in discounts has been committed to reimburse schools and libraries based on applications filed by these schools and libraries,⁵ of which only an estimated 3-4% has gone to libraries.⁶ This study focuses on E-rate discounts provided to libraries.⁷ Indeed, this report may be the first study to consider E-rate’s role in the provision of public library Internet services on a national level.

Bill and Melinda Gates Foundation

The Bill & Melinda Gates Foundation U.S. Library Program started in 1997 with the goal of expanding public access to computers, the Internet and digital information in State library certified public libraries that serve low-income communities. The Gates Fund has been the principal private funder of public library Internet service development spending \$109,141, 929 as of November 2001,⁸ with a total investment of \$250 million projected by the end of 2003.⁹

Previous Work by the Study Team

The study reported here builds upon previous research conducted by the authors and funded by the American Library Association, Washington Office (McClure and Bertot, 2000a, 2000b). These previous efforts intended to determine the feasibility of assessing the benefits and impacts from various funding sources on the role that public libraries played in addressing digital divide issues. Based on the research completed through 2000, the following *preliminary* findings resulted from that earlier work:

- 1998-2000 was a unique time period for public library information technology infrastructure development because of the E-rate, LSTA, and the Gates Foundation awards: E-rate promoted infrastructure and telecommunications, LSTA promoted program development, and Gates provided necessary hardware and software. The combined and concurrent significance of these three programs has, as one library director commented, “had an unparalleled impact on improving our library.”

⁵ See <<http://www.sl.universalservice.org/apply/fcyear2/national.asp>> for details.

⁶ See: Universal Service Administrative Company (USAC). (2000). Funding commitments by rural/urban statistics and entity type. Annual Report. p. 38.

⁷ For studies assessing the E-rate on schools see, for example, U.S. Department of Education (2000) and Benton Foundation (2001).

⁸ From Gates web page: <http://www.gatesfoundation.org/libraries/grants/default1.htm> Microsoft software contribution is probably not included in this total.

⁹ Bill & Melinda Gates Foundation U.S. Library Program. (2001, February 21). Press release. <<http://www.gatesfoundation.org/pressroom/release.asp?PRindex=352>>

- Local libraries to make substantial gains in the library's information technology infrastructure, and networked-based services and resources have leveraged the E-rate, LSTA, Gates awards, and local resources.
- These various programs have spawned a number of new and innovative partnerships between public libraries and other organizations in the provision of computer and networked-based services.
- Were it not for the E-rate awards, many libraries would not have been able to upgrade their infrastructure, expand access to networked services in the library's community, or otherwise support a range of applications since local money could not otherwise have been obtained for such purposes.
- These programs (and especially the E-rate) while frequently constituting only 1% or less of the library's budget provided discretionary money and significant flexibility that could not otherwise be obtained from local funds.
- Although the difficulty of the process and procedures for obtaining E-rate awards was often described as "onerous and abnormally time consuming," most participants were willing to spend the staff time to obtain the awards. There are, however, significant improvements needed in the application process, the forms, and the overall program procedures.
- A range of data sources from local public libraries, state libraries, the School Library Division E-rate data base, and other sources can assist in determining the benefits and impacts of various public library funding sources on digital divide issues, justifying the completion of a comprehensive study [reported here].
- There is considerable concern that these (or additional/replacement) programs continue for future technology upgrades and program development.

Previous research, including a number of national surveys conducted by the authors (Bertot and McClure, 1999, 2000, and 2002), suggested the important relationships among these various funding programs and the degree to which public libraries have been able to leverage successfully those sources against each other and with other organizations. Moreover, the previous work demonstrated the feasibility for conducting the study that is reported here.

Study Goals

The purpose of the current research effort is to assist the public library community, state and federal policy makers, and others interested in the future of public libraries to assess the impact and benefits of selected funding sources on Internet connectivity in public libraries. More specifically, the goals were to:

- Obtain assessments from public and state librarians, community users, and others as to the impacts and benefits derived from Internet connectivity and services and, to the extent possible, the impacts provided by the various types of funding mechanism available to the libraries for Internet-based services;
- Provide a composite overview of the benefits and impacts from Internet connectivity and services for public libraries;
- Assess the impacts and benefits that the communities and selected community groups that public libraries serve derive from public library-based Internet connectivity and services;

- Identify the key funding mechanisms for public library Internet connectivity at the national, state, and local levels;
- Determine if it is possible to identify which funding sources provided what public library Internet services, resources, and infrastructure;
- Identify and analyze the types of requests for funding from public libraries from E-rate resources;
- Offer recommendations that will assist the public library community, state and federal policy makers, users, and others track ongoing uses of E-rate discounts and other Internet connectivity funding mechanisms, and track the benefits derived through those funding sources; and
- Inform the public library community and state and federal policy makers about the uses, impacts, benefits, and issues related to Internet connectivity (by funding mechanism, if possible) for public libraries.

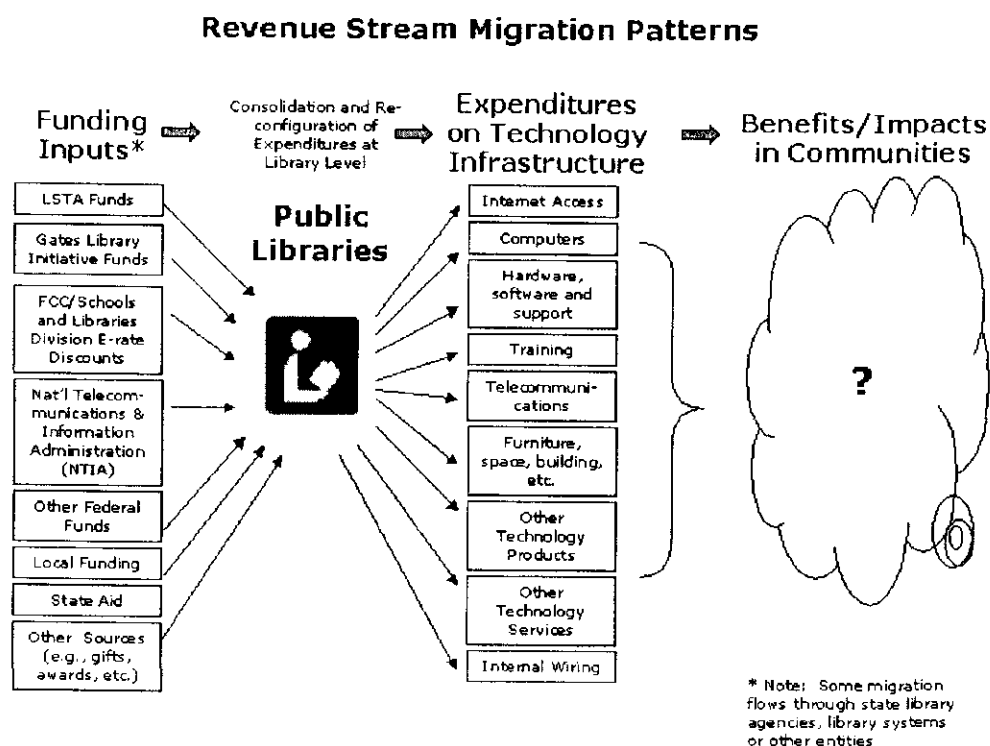
Overall, the intent of this study is to assist various stakeholder groups better understand the role, impact, and uses of the Internet in the public library environment, selected Internet-based services, and selected funding mechanisms for Internet connectivity in the public library community.

Study Approach

The study relied on a multi-stage approach that began February 2001 and ended January 31, 2002. Overall, it is possible to group the study data collection activities into four parts:

1. **Inputs.** Reviewed the inputs or funding sources (e.g., E-rate, Gates, LSTA, etc.) that go into public library Internet connectivity.
2. **Expenditures.** Assessed Internet connectivity expenditures for public library Internet connectivity at the State library, consortia, and individual public library level.
3. **Specific services.** Identified the types and nature of public library Internet services and the impacts and benefits of those services on both public libraries and the communities that the public libraries serve. The researchers attempted to parse out which funding streams go to provide which public library Internet connectivity services (e.g., telecommunications, equipment, services, and resources).
4. **Impacts and benefits.** Identified and described impacts and benefits that have resulted from E-Rate, LSTA, the Gates Foundation awards, and other programs and attempted to link those benefits and impacts to specific programs.

Figure 1.1, Revenue Stream Migration Patterns is a model depicting possible relationships among funding inputs and impacts/benefits. This model provided an initial framework for organizing the study and developing a range of data collection instruments.

FIGURE 1.1 Revenue Stream Migration Patterns

Throughout the study, the researchers relied on multiple qualitative and quantitative data collection techniques such as focus groups, interviews, surveys, and case studies. Specific steps in the methodologies and data collection activities were based upon proven research approaches and strategies that ensure valid and reliable data (e.g., Rossi and Freeman, 1993; Krueger and Casey, 2000; Creswell, 1994). More specifically, the study used a multi-method and iterative learning strategy through which the researchers tested and developed tools for the study's data collection activities. Table 1.1 provides a summary of the types of research topics, research questions, and data sources that guided the study in terms of various data collection activities. The range of these research questions was ambitious and not all of the research questions ultimately were addressed (see findings and recommendations in Chapters 2, 3, and 4).

The study profited by the assistance of an advisory committee and from a liaison at the American Library Association's Washington Office, Office of Information Technology and Policy. This person served as a single point of contact for the research team and had the following responsibilities:

- Provided assistance to the research team in identifying key contacts and introducing them to the study team regarding data collection;

- Handled logistics related to meetings between the research team and the advisory committee, and with others as needed;
- Participated in data collection activities; and
- Worked with the research team to obtain various data sets related to the project from the Schools and Libraries Division (SLD) of the Universal Service Administrative Company (USAC), State libraries, and others as needed.

The advisory committee included about a dozen individuals and represented a broad range of interests and knowledge related to the study topics.¹⁰ They offered advice on project activities and data collection instruments, provided project advice, and assisted in the evaluation of the study. The advisory committee participated primarily via e-mail and individual interactions with the study team members. There were meetings of the advisory committee held in conjunction with various professional meetings.

The study was completed in the following phases:

- Phase I: Study preparation, detailing study tasking, establishing the advisory committee, and initiating the review of related information and literature (February-March).
- Phase II: Additional analysis of SLD data, obtaining data from the SLD E-rate database, assessing that data, and reporting findings from that analysis (February – November).
- Phase III: Preparation and actual site visits to four states and follow-up interviews as needed (May-August).
- Phase IV: Analysis of site visit data and SLD E-rate database analysis (September-November).
- Phase V: Completion of the draft final report and the final report (December – January 2002).

The overview of study phases and activities does not discuss a number of difficulties encountered in obtaining and analyzing data from the E-rate database at the SLD and the logistics related to conducting the site visits in four states.

¹⁰ See Appendix E for a list of Advisory Committee members.

Table 1.1. Proposed Study Research Areas, Research Questions, and Data.

Research Area	Research Questions	Type of Data
Library Organization and Management	<ul style="list-style-type: none"> What is the effect of Internet connectivity on library staff? What are the core skills necessary for librarians to work effectively in the networked environment? How are libraries organizing/reorganizing as a result of the transition to the networked environment? Does the provision of networked services in libraries require new management and service provision techniques? What is the impact of the Internet on library strategic and/or other planning activities? Does the networked environment offer/determine new roles for libraries? Are new library/community organization partnerships developing as a result of library Internet connectivity? What are the costs to libraries for providing network-based services? Does the networked environment enable new library services? Is there a shift in the <i>location</i> of library services (e.g., in-library v. remote)? Does provision of network-based services require new library-user policies? 	<ul style="list-style-type: none"> Staff time, effort, workload changes Necessary MLS and continuing education training New organizational structures/models for management Partnerships, collaborative models New services/service delivery mechanisms Planning and role setting Costs, budgetary issues Acceptable use policies, minor use, ADA compliance
Social Impacts	<ul style="list-style-type: none"> What are the benefits users and/or particular user segments (e.g., youth, seniors, others) derive through library Internet connectivity and access to network services? How does the larger library community (e.g., local organizations, and schools) benefit from library Internet connectivity? 	<ul style="list-style-type: none"> Benefits/impacts of public access Internet services on users Benefits/impacts of library Internet services/connectivity on the community
National Policy Implications	<ul style="list-style-type: none"> What national policies exist to support library Internet connectivity and network services provision (e.g., LSTA, E-rate)? To what extent do existing national policies address the <i>actual</i> needs of libraries in the networked environment as identified through data from this study? To what extent do libraries (as opposed to other types of institutions) benefit from existing national programs to support Internet connectivity (e.g., E-rate)? Are there other models for developing and/or enhancing library Internet connectivity from which national policy can learn (e.g., Gates, state initiatives)? Are policy changes necessary to <i>best</i> support library Internet connectivity and network services provision? 	<ul style="list-style-type: none"> Assessment of key national, state, and other connectivity programs and the benefits/issues of those programs Assessment of the benefits derived by libraries from the existing national connectivity programs Determination of the appropriateness of national Internet connectivity programs given the state of library Internet connectivity and network service provision Identification of recommendations for changes to national policies
Existing Data Analysis (see http://www.sl.universalservice.org/apply/fcyear2/national.asp for example analysis)	<ul style="list-style-type: none"> What states (regions, Congressional districts, cities, etc.) have received what amounts of money? How much of the disbursements have gone to communities with what poverty levels? What general types of categories of expenses have been supported by the disbursements? What types of libraries, size of libraries, library consortia have received disbursements? 	<ul style="list-style-type: none"> Various cross-tabs that compare amounts of disbursements by community type, by organizational affiliation, etc. Average disbursement for type of community, size of community, type organizational affiliation, etc. Disbursements by library type, library size, other key library demographics

Issues in Method

There were a number of methodological and other issues associated with the study that are important to note:

- **Co-mingling of resources that support Internet/telecommunications efforts in public libraries.** The degree to which it is possible to attribute *direct* impacts and benefits of Internet services in public libraries to the various sources of funding was and is problematic. Public libraries receive external support for Internet-based and other technology-related services through E-rate, LSTA, Gates Fund, and/or state-based initiatives.
- **Availability of data.** There are several data collection efforts underway and/or data sets that were available for analysis purposes. These data sets (e.g., SLD, Gates, NTIA, etc.) often times were non-comparable and upon examination, were quite difficult to manipulate.
- **Other evaluations.** The Department of Education conducted an evaluation of the E-rate as the discounts relate to schools during this study. Members of the study team provided assistance to this effort regarding data collection for school and public libraries. More recently, the Benton Foundation issued a study *Great Expectations: The E-rate at Five* (2001) which did not address the role of libraries in E-rate. The study team found it was quite difficult to relate the research activities of these (and other) evaluation efforts in determining the broadest impact picture of the E-rate discounts.
- **Evolving policy environment.** The various federal programs have seen a number of developments and changes since passage of the Telecommunications Act of 1996. Additional changes occurred in the procedures for distributing E-rate disbursements, policy related to the E-rate program, or changes made in the organizational structure for the SLD. Similar changes occurred and are likely to occur in the future regarding LSTA and awards from the Gates Foundation.

In short, the findings are based upon a snap shot of the environment related to public library Internet expenditures during the Summer and Fall of 2001. Additional research (see Chapter 5) will be needed to update the snapshot as reported here.

Benefits and Importance of the Study

The recent digital divide studies conducted by NTIA (U.S. Department of Commerce, National Telecommunications and Information Administration, 1995, 1998, 1999, 2000, 2002) identifies segments of the U.S. population that are less likely to have access to networked information services and resources in the home. These populations tend to be minority, less educated, and lower income. A key question in the digital divide discussion is what community access centers – such as the public library – do to provide those “have nots” with critical access to technology, training in its use, and technology-based services. Moreover, there has not been a systematic study of the *specific* services that public libraries provide in the networked environment and the impacts and benefits of those services on the digital divide.

The assessment of the uses and results from the various Internet funding programs as reported in this study can:

- Identify key policy issues related to the digital divide, particularly Universal Service and equitable access to networked information resources and services in the United States;
- Provide an assessment of the roles public libraries play in closing the digital divide, and the impact of those roles on the communities the libraries serve;
- Provide a sense of the impacts and benefits communities derive from public library Internet connectivity and services;
- Identify the role of E-rate discounts and other funding sources in library services and technology planning activities;
- Provide a better understanding of how these awards are being used by libraries;
- Provide a better understanding of the E-rate application and disbursement process;
- Assist policy makers to determine how best to refine various Universal Service policy goals through programs such as the E-Rate and LSTA in relation to the digital divide; and
- Assess the relationship between various funding programs and Internet services.

The findings offer lessons from the various public library Internet programs that can continue to improve overall public library connectivity, services, and use of the Internet – at the local, state, and national levels.

In addition, study results can be used to fine-tune future program activities to improve the impact and success of the program. Products from this study can also be used to maximize the impact from federal funding for public libraries. The funding programs and initiatives are simply too important *not* to study their impacts and benefits. If the nation is to be successful in the global networked information environment, it is essential that public libraries and the residents they serve obtain the maximum benefits possible from these programs.